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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/635,141	08/09/2000	Mitsunori Nodono	Q60353	5577

7590

07/23/2002

Sughrue Mion Zinn MacPeak & Seas
2100 Pennsylvania Avenue NW
Washington, DC 20037

EXAMINER

COLE, ELIZABETH M

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 07/23/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/635,141

Applicant(s)

NODONO ET AL.

Examiner

Elizabeth M Cole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) 4,5,21-27 and 32-47 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-20 and 28-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. Applicant's election without traverse of Group I in Paper No. 5 is acknowledged.
2. Claims 6-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6-20 recite a "laminating step", wherein the foam layer sheet is laminated to itself or where a gas barrier layer is laminated to the extruded foam layer. However, the claims do not recite to what portion of the foam layer the gas barrier layer is laminated, and therefore, these claims are indefinite because the structure being formed by the process is not clear. For example, in claim 6, the claim recites "a laminating step for laminating at least one multilayer polyolefin foamed sheet produced", but it is not clear what the sheet is laminated to or what structure is ultimately formed.

With regard to claim 7, the claim recites that the sheet is folded up. However, it is not clear where the fold is located, or how the various layers, i.e., foamed polyolefin, non-foamed polyolefin, etc., are located in the folded structure. In claim 8, the claim recites that the foam is extruded through a cylindrical die and is either laminated as is or is slit and then superimposed and laminated. Again, this is not clear because it is not clear whether by a cylindrical die this means that a hollow cylinder is formed which is then slit to form a sheet or if a solid cylinder is formed which is then slit and laminated together. Similar problems exist in claims 9-21 with regard to the location of the vapor barrier with regard to the foam and non-foamed polyolefin layers, as well as with regard to the structure of both the cylindrical body produced, (i.e., is it hollow or solid), and the resulting laminates formed by either folding, splitting and/or laminating the cylindrical body.

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3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 2 and 28-29 are rejected under 35 U.S.C. 102(b) as being anticipated by

Park et al, U.S. Patent No. 5,180,751. Park et al discloses a method of making a multilayer polypropylene foam sheet comprising the steps of melting the polypropylene resin, adding a blowing agent to the resin, and extruding the resin to form a foamed sheet. Park et al discloses that an additional layer may be extruded onto the foamed sheet wherein the layer can be a non-foamed polypropylene. The second layer may be extruded onto the foamed layer as the foamed layer is extruded. The foamed layer may be extruded from a circular die so that it forms a cylinder. The cylinder may be split to form sheets. The extruded foam may have a gas barrier layer bonded to it, in addition to the non-foamed polypropylene layer. The extruded foam may be sized by passing it over a sizing drum. See col. 7, line 63 - col. 8, line 57.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 6-20 and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Park et al, U.S. Patent No. 5,180,751. Park et al discloses a method of making a multilayer

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polypropylene foam sheet comprising the steps of melting the polypropylene resin, adding a blowing agent to the resin, and extruding the resin to form a foamed sheet. Park et al discloses that an additional layer may be extruded onto the foamed sheet wherein the layer can be a non-foamed polypropylene. The second layer may be extruded onto the foamed layer as the foamed layer is extruded. The foamed layer may be extruded from a circular die so that it forms a cylinder. The cylinder may be split to form sheets. The extruded foam may have a gas barrier layer bonded to it, in addition to the non-foamed polypropylene layer. See col. 7, line 63 - col. 8, line 57. Park et al differs from the claimed invention because Park et al does not disclose the particularly claimed structures made by the method, such as where the vapor barrier layer is located, etc., however it would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied the barrier layers to the polyolefin foamed material in order to optimize the properties which were desired in the final product. Thus, for example, if a product having outer foam layers was desired in order to provide cushioning properties, then it would have been obvious to apply the gas barrier layer between the foam layers, while if a smooth exterior was desired, it would have been obvious to apply the gas barrier to the outer surfaces of the foam layers. With regard to claim 3, it would have been obvious to optimize the thickness of the die lip diameters, in order to produce materials having the desired size and shape.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (703) 308-0037. The examiner may be reached between 6:30 AM and 5:00 PM Monday through Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (703) 308-2414.

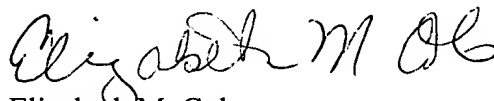
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Inquiries of a general nature may be directed to the Group Receptionist whose telephone number is (703) 308-0661.

The fax number for official faxes is (703) 872-9310. The fax number for official after final faxes is (703) 872-9311. The fax number for unofficial faxes is (703) 305-5436.

A handwritten signature in black ink, appearing to read "Elizabeth M. Cole". The signature is fluid and cursive, with the first name "Elizabeth" written in a larger, more prominent script than the last name "Cole".

Elizabeth M. Cole
Primary Examiner
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e.m.c

July 11, 2002